



Niagara Region

Niagara Escarpment Crossing
Comprehensive Environmental
Assessment
Proposed Terms of Reference

Appendix D
Agricultural Work Plan

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Prepared by:



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1 Introduction

This document outlines the proposed work plan that will be carried out during the Niagara Escarpment Crossing (NEC) Environmental Assessment (EA) to generate a more detailed description and understanding of the environment from an agricultural perspective. Further, this document describes how that information will be used to assess the effects of the alternatives and proposed project on the environment through evaluation criteria and indicators. This work plan forms **Appendix D** to the proposed Niagara Escarpment Crossing Comprehensive EA Terms of Reference (ToR) and should be read in conjunction with it.

The ToR presently provides a preliminary description of the environment to gain a general understanding of the potential effects that should be examined in the Niagara Escarpment Crossing EA based on the range of alternatives to the project currently anticipated. This description reflects all components included within the Ontario *Environmental Assessment Act (EA Act)* definition of the environment: natural, social, built, economic, and cultural.

Several investigative studies are proposed as part of the Niagara Escarpment Crossing EA to expand on this preliminary description, including, but not limited to the following:

- Air Quality
- Agricultural
- Archaeology
- Built Heritage and Cultural Heritage Landscapes
- Contaminated Property
- Groundwater
- Land Use
- Natural Heritage
- Noise and Vibration
- Surface Water
- Visual Impact

The details associated with the agricultural investigation are provided in this document while details of the other investigative studies are provided as separate work plans. In addition to the investigative studies, the proposed ToR includes three other work plans: Traffic, Operations and Safety, Transportation Planning and Engineering, and Financial all of which are included as separate appendices.

2 Establishment of Agricultural Conditions

2.1 Confirmation of the Preliminary Study Area

The preliminary study area provided in the ToR will be utilized as a starting point for establishing existing and future environmental conditions (**Figure 2-1**). This preliminary study area will be finalized during preparation of the Niagara Escarpment Crossing EA when more detailed information has been obtained, the alternatives to the project have been confirmed, and the potential environmental effects are better understood.

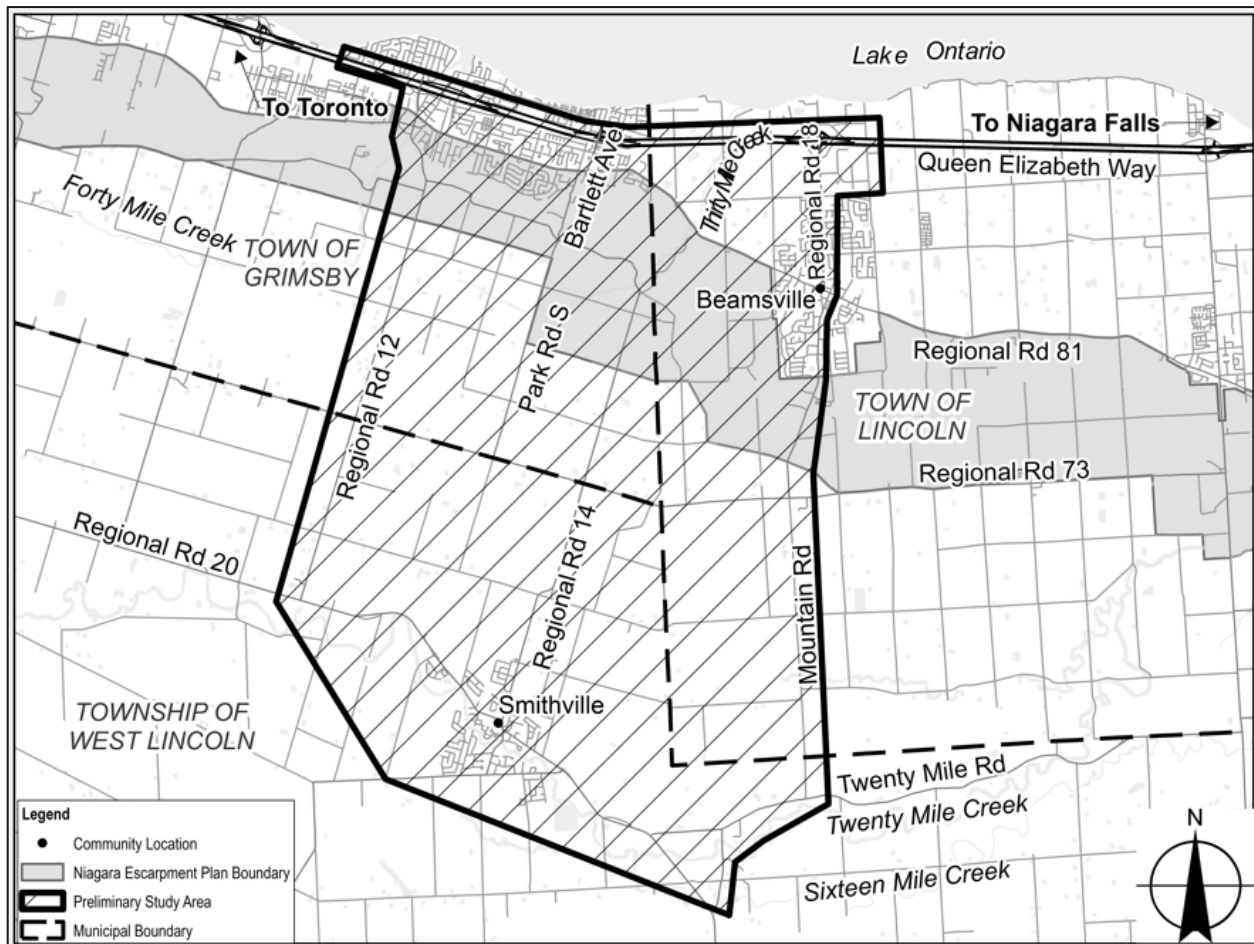


Figure 2-1: Preliminary Study Area

2.2 Review of Available Existing Information Sources

Available existing sources of information will be collected and reviewed to determine existing and future environmental conditions, including any data gaps that need to be addressed through subsequent work (e.g., field investigations, modeling, etc.). Presently, the list of existing information sources that will be collected and reviewed as part to the proposed Agricultural Work Plan includes, but may not be limited to, the following:

- *Aggregate Resources Act* Standards
- A Place to Grow, Growth Plan for the Greater Golden Horseshoe, 2020
- Google Earth and Google Street View imagery
- Greenbelt Plan, 2017
- Niagara Escarpment Plan, 2017
- Niagara Region Official Plan, 2022
- Property maps/assessment data
- Provincial Policy Statement, 2020 – including Specialty Crop Areas
- Ontario Ministry of Agriculture, Food and Rural Affairs. Agricultural Resource Inventory report and maps
- Ontario Ministry of Agriculture, Food and Rural Affairs, Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs, draft Guidance Document for Agricultural Impact Assessments
- Ontario Ministry of Agriculture, Food and Rural Affairs, Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas
- Ontario Ministry of Agriculture, Food and Rural Affairs, The Minimum Distance Separation (MDS) Document
- Ontario Ministry of Agriculture, Food and Rural Affairs, Implementation Procedures for the Agricultural System in Ontario's Greater Golden Horseshoe, Publication 856

- Agriculture Canada Publication - The Soils of the Regional Municipality of Niagara (Volume 1 & 2)
- Town of Grimsby Official Plan, 2012
- Town of Grimsby Agricultural Impact Assessment (AIA), 2022
- Town of Lincoln Official Plan, 2014
- Township of West Lincoln Official Plan, 2021
- Relevant provincial, regional, and municipal land use plans, policies, strategies, and guidelines
- Relevant provincial, regional, and municipal led studies (e.g., master plans, secondary plans, land use planning studies, transportation planning studies, etc.)
- Relevant provincial, regional, and municipal online mapping tools (e.g., pits and quarries, etc.)

In addition, documentation prepared during the Niagara Escarpment Crossing EA from the other proposed work plans (e.g., Land Use, etc.) will also be considered, as appropriate, along with the preceding existing information sources.

2.3 Proposed Field Investigations

Field investigations are proposed to supplement and enhance available existing sources of information so that additional data is generated to assess each alternative (i.e., identifying potential environmental effects, developing appropriate impact management measures for addressing potential adverse environmental effects, and describing net effects). The need for field investigations will be based on the level of detail associated with the existing information sources collected and reviewed, accessibility of the final study area, and comments received from review agencies, Indigenous communities, and the public.

The need for an increased level of detail and collection of field data is expected as the Niagara Escarpment Crossing EA progresses. While the assessment of alternative(s) to the project can be completed based on existing source data, the assessment of alternative methods of carrying out the project will be based on more site-specific information generated through subsequent work (e.g., field investigations, modeling, etc.).

The following field investigation is currently proposed as part of the Agricultural Work Plan:

- A “windshield-level” survey for verifying the land uses (both agricultural and non-agricultural) determined through the review of available existing information sources. Agricultural land use data is to be collected through observations made during field surveys conducted from a vehicle and provides a visual overview of the land uses being investigated.

Documentation

The results of reviewing available existing information sources and the proposed field investigation will be documented in an Agricultural Baseline Conditions Report.

3 Assessment of the Alternatives

3.1 Alternatives To the Project

Following confirmation of the preliminary list of alternatives to the project, they will be assessed and comparatively evaluated leading to a recommended alternative(s) to the project. The recommended alternative(s) will be presented to review agencies, Indigenous Communities, and the public for a defined period to receive comments, following which a preferred alternative(s) will be identified. The assessment of the alternatives to the project (through the application of evaluation criteria) will be based on available existing information sources contained in the Baseline Conditions Reports.

3.1.1 Preliminary Criteria and Indicators

The preliminary evaluation criteria and indicators that will be used for assessing the alternatives to the project from an Agricultural perspective include, but may not be limited to, those set out in **Table 3-1**. The preliminary evaluation criteria and indicators will be finalized based on comments received during the Niagara Escarpment Crossing EA and documented in the EA Report.

Table 3-1: Preliminary Criteria and Indicators for Assessing the Alternatives To the Project

Category	Criterion	Indicator
Built Environment	<ul style="list-style-type: none"> - Effect on existing agricultural land uses (e.g., loss, fragmentation, etc.) 	<ul style="list-style-type: none"> - Extent of agricultural land uses affected - Number of landowners affected
Built Environment	<ul style="list-style-type: none"> - Effect on existing agricultural operations including capital investment 	<ul style="list-style-type: none"> - Extent of agricultural operations affected (e.g., irrigation, tile drainage, field access, etc.)
Economic Environment	<ul style="list-style-type: none"> - Effect on the agricultural land base (i.e., Specialty Crop Area, Prime Agricultural Area) 	<ul style="list-style-type: none"> - Extent of the agricultural land base affected

Category	Criterion	Indicator
Economic Environment	- Effect on the continuity of the agricultural land base	- Ability to develop future agricultural operations
Economic Environment	- Effect on agricultural production (e.g., one time replacement costs, increased operating costs, etc.)	- Extent of disruption to existing agricultural operations

3.2 Alternative Methods of Carrying Out the Project

Following the identification of the preferred alternative(s) to the project, alternative methods of carrying out the project will be generated, possibly screened, assessed, and comparatively evaluated leading to a recommended method(s). The recommended method(s) will be presented to review agencies, Indigenous communities, and the public for a defined period to receive comments, following which a preferred method(s) will be identified.

The generation and possible screening of the alternative methods will be based on available existing information sources contained in the Baseline Conditions Reports. The assessment of the alternative methods of carrying out the project (through the application of evaluation criteria) will be based more on the information provided through subsequent work (e.g., field investigations, modelling, etc.) contained in the Baseline Conditions Reports, as appropriate.

3.2.1 Preliminary Criteria and Indicators

The preliminary evaluation criteria and indicators that will be used for assessing the alternative methods of carrying out the project from an agricultural perspective include, but may not be limited to, those set out in **Table 3-2**. The preliminary evaluation criteria and indicators will be finalized based on comments received during the Niagara Escarpment Crossing EA and documented in the EA Report.

**Table 3-2: Preliminary Criteria and Indicators for Assessing the Alternatives
Methods of Carrying Out the Project**

Category	Criterion	Indicator
Built Environment	<ul style="list-style-type: none"> - Effect on existing agricultural land uses (e.g., loss, fragmentation, etc.) 	<ul style="list-style-type: none"> - Approximate area (ha) of active agricultural operations affected - Number of landowners affected - Approximate area (ha) of fragmented farm parcels
Built Environment	<ul style="list-style-type: none"> - Effect on existing agricultural operations including capital investment 	<ul style="list-style-type: none"> - Fragmentation of agricultural fields - Minimum distance separation requirements met - Disturbance to artificial drainage systems and agricultural drains - Removal of farm fences, entrances, and paddocks - Disruption of agricultural related businesses - Disruption of normal external haul routes for farm machinery movements
Economic Environment	<ul style="list-style-type: none"> - Effect on agricultural soil resources 	<ul style="list-style-type: none"> - Approximate area (ha) of Class 1, Class 2, and Class 3 soils removed (priority in that order)

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Category	Criterion	Indicator
		- Approximate area (ha) of Specialty Cropland removed
Economic Environment	- Effect on the continuity of the agricultural land base	- Ability to develop future agricultural operations
Economic Environment	- Effect on agricultural production (e.g., one time replacement costs, increased operating costs, etc.)	- Extent of disruption to existing agricultural operations

4 Impact Assessment of the Proposed Project

Once selected, the preferred method(s) of carrying out the project (i.e., proposed project) will be further developed at a preliminary design level of detail so that the potential environmental effects can be identified with more certainty, more site-specific impact management measures (i.e., avoidance, mitigation, and compensation measures) can be developed for application, net environmental effects can be identified with more certainty, appropriate monitoring requirements can be clearly defined, and specific approval/permitting requirements for constructing the proposed project can be identified.

In concert with preparing the preliminary design level of detail, it may be necessary to undertake additional work (e.g., field investigations, modeling, etc.) at the impact assessment stage of the Niagara Escarpment Crossing EA. The additional work proposed as part of the Agricultural Work Plan could include the following subject to preparation of the EA:

- An updated “windshield-level” survey augmented by a site walk where additional understanding is needed of the land uses potentially impacted by the proposed project. The extent of the site walk would be subject to property ownership and obtaining permission to enter approval for those properties privately held.

Documentation

The results of the impact assessment including any additional work will be documented in an Agriculture Impact Assessment Report. Excess soils generated as part of the project will be handled in accordance with the Excess Soils Regulation (O.Reg. 406/19) as per the contaminated Property Work Plan at the detailed design stage.

5 Documentation

The results of implementing this work plan will be documented in two reports during the Niagara Escarpment Crossing EA:

- **Agriculture Baseline Conditions Report** – will document the results of collecting and reviewing available existing sources of information and the proposed field investigations.
- **Agriculture Impact Assessment Report** – will document the results of the impact assessment of the proposed project including any additional investigations.

Upon completion, each report will be made available during the Niagara Escarpment Crossing EA to review agencies, Indigenous Communities, and the public for their information via the project website and upon request and will become either a reference or supporting document to the submitted EA Report. The EA Report will be based on and reflect the information contained in the two reports.